GUREVICH, M.I. [Hurevych, M.I.]; BERSHTEYN, S.A.; GOLOV, D.A. [Holov, D.O.]

Device for the synchronous recording of changes in oxygen tension
and tissue blood stream. Fiziol. zhur. [Ukr.] 11 no.6:840-844
N-D '65.   (MIRA 19:1)

1. Laboratoriya fiziologii krovoobrashcheniya Instituta fiziologii
im. Bogomol'tsa AN UkrSSR, Kiyev.

EWT(d)/EWT(1)/EWP(m)/EWT(m)/EWP(w)/EWP(k)   WW/EM/GD

ACC NR: AT6016794   (N)   SOURCE CODE: UR/0000/65/000/000/0229/0235

AUTHOR: Gurevich, M. I.

ORG: Moscow Institute of Railroad Transportation Engineers, Moscow (Moskovskiy institut inzhenerov zheleznodorozhnogo transporta)

TITLE: Vortex near the free surface

SOURCE: International Symposium on Applications of the Theory of Functions in Continuum Mechanics. Tiflis, 1963. Prilozheniya teorii funktsiy v mekhanike sploshnoy sredy. t. 2: in continuum mechanics. v. 2: Fluid and gas mechanics, mathematical methods); trudy simpoziuma. Moscow, Izd-vo Nauka, 1965, 229-235

TOPIC TAGS: vortex flow, underwater wing, fluid surface, boundary layer suction, ideal fluid, incompressible fluid, weightless fluid

ABSTRACT: Fundamental works on the theory of a submerged wing assume that the free surface differs little from the horizontal level of an unperturbed fluid. This approach a priori excludes the application of the theory to the case of small submersions by means of an explicit

Card 1/2

L 04882-67

ACC NR: AT6016794   3,

solution of at least a simplified problem. In the present paper a solution is found for the flow of an ideal, incompressible, weightless fluid with a free surface past vortices. The flow is bounded at the bottom by a solid horizontal wall. It is noted that h_{min} (where h is depth) is independent of the flow rate (q/2). Without disrupting the flow pattern the vortex cannot be closer to the free surface than 2 v_0 (where v_0 is flow rate, is circulation). This is an important fundamental difference between a nonlinear problem and its linearized approximation, since in the latter case the vortex may be located as close to the free surface as desired. The fact of the existence of h_{min} in the real case of an underwater wing corresponds to the beginning of air suction, i.e., the appearance of cavitation when the wing approaches too close to the free surface. Orig. art. has:: 17 formulas and 6 figures.

SUB CODE: 20/   SUBM DATE: 13Sep65/   ORIG REF: 005/   OTH REF: 003

Card 2/2

1999. Neuro-humoral Changes in Reflexogenic Hypertension. (К вопросу о нейро-гуморальных сдвигах при рефлексогенной экспериментальной гипертонии)

M. I. GUREVICH. Архив Патологии [Arkh. Patol.] 12. No. 1, 36–40, 1950. 13 refs.

Hypertension was induced in rabbits by means of bilateral resection of the neuro-receptors in the arch of the aorta and the carotid sinuses. Blood pressure, pulse, and pupillary reactions to adrenaline and pilocarpine were studied. The adrenergic activity of the blood was measured biologically on isolated hearts of frogs, and cholinergic activity on eserinized back muscles of leeches. Cholinesterase was estimated by titration. The results demonstrated that such induced hypertension is associated with an increase in the sympathicomimetic properties of the blood, which is accounted for to a large extent by the presence of adrenaline-like substances. The author concludes that increase in sympathetic tone plays an important part in the pathogenesis of such hypertension.

L. Crome

Abstracts of World Medicine
Vol 8 1950

GUREVICH, M.I., kand.med.nauk

Comparison of neurohumoral shifts in reflexogenic and renal forms
of experimental hypertension. Medych.zhur. 20 no.3:9-20 '50.
(MIRA 11:1)

1. Z viddilu eksperimental'noi patologii (zaviduvach - chlen-
korespondent AMN SRSR prof. M.M.Gorev) Institutu eksperimental'noi
biologii i patologii im. akad. O.O.Bogomol'tsya Ministerstva
okhoroni zdorov'ya URSR (direktor - prof. O.O.Bogomolets')
      (HYPERTENSION)   (BODY FLUIDS)   (REFLEXES)

GUREVICH, M.I.

Neuro-humoral changes in experimental renal hypertension. Arkh. pat.,
Moskva 13 no.4:23-27 July-Aug 1951.   (CLML 21:2)

1. Of the Department of Experimental Pathology (Head -- Prof. N. N.
Gorev, Corresponding Member of the Academy of Medical Sciences USSR),
Institute of Experimental Biology and Pathology imeni Academician A. A.
Bogomolets, Ministry of Public Health Ukrainian SSR.

GUREVICH, M.I.

GUREVICH, M.I.

Problems of pathogenesis, prophylaxis and therapy of hypertension.
Medych. zhur. 23 no.5:90-95 '53.   (MLRA 8:2)
      (HYPERTENSION)

GOREV, M.M.; GUREVICH, M.I.

Characteritsics of the functional state of the central nervous system in hypertension. Medych.zhur.24 no.2:35-41 '54.

(MLRA 8:10)

1. Institut fiziologii im. O.O. Bogomol'tsya Akademii nauk URSR (laboratoriya fiziologii krovoobigu i dykhannya) ta Kyivs'kiy medichniy stomatologichniy institut (kafedra patologichnoy fiziologii)

(HYPERTENSION, physiology.
    CNS)
(CENTRAL NERVOUS SYSTEM, in various diseases,
    hypertension)

GUREVICH, M.I.; TKACHUK, V.P.

Capillary changes in experimental hypertension. Medych.zhur. 24
no.6:78-82 '54.   (MLRA 8:7)

1. Institut fiziologii im. O.O.Bogomol'tsya Akademii nauk URSR.
        (HYPERTENSION, experimental,
            capillary changes)
        (CAPILLARIES, in various diseases,
            exper. hypertension)

GUREVICH, M.I.; IL'CHEVICH, M.V.

Materials on the problem of the effect of prolonged sleep on the
course of clinical and experimental hypertension. Fiziol.zhur.
(Ukr.) 1 no.1:40-45 Ja-F '55..   (MLRA 9:9)

1. Institut fiziologii imeni akademika O.O.Bogomol'tsya Akademii
nauk URSR, Laboratoriya fiziologii krovoobigu i dikhannya.
        (HYPERTENSION)   (SLEEP--THERAPEUTIC USE)

GUREVICH, M.I.

Disorders in the higher nervous activity in experimental renal
hypertension. Fiziol.zhur. [Ukr.] 1 no.2:62-71 Mr-Ap '55.

(MLRA 9:9)

1. Institut fiziologii imeni akademika O.O.Bogomol'tsya Akademii
nauk URSR, Laboratoriya fiziologii kroboobigu i dikhannya.
  (HYPERTENSION)   (CEREBRAL CORTEX)

GUREVICH M I

USSR/Medicine - Physiology   FD-2508

Card 1/2   Pub 17-7/20

Author   : Gurevich, M. I.

Title   : On the functional state of the central nervous system in experi-
            mental hypertension. Report 1: The effect of medicated sleep on
            the chronaxy of muscles in experimental hypertension

Periodical : Byul. eksp. biol. i med. 4, 29-32, Apr 1955

Abstract : Seeks experimental evidence to justify the view that the focal
            point of stimulation in the subcortical region of the brain evi-
            denced in experimental hypertension (v.N.N. Gorev, "Nervous Regu-
            lation and Respiration", published by Academy of Medical Science
            USSR, 1952) is linked with a breakdown in the dynamics of the basic
            cortical processes. In connection with the above, put rabbits with
            a reflexogenic form of experimental hypertension under prolonged,
            medicated sleep, using it as a method for pathogenic analysis of
            experimentally produced, protracted elevation of the arterial blood
            pressure. Evaluated the functional state of the C. N. S. by chron-
            aximetry. Tables; graphs. Fourteen references, 12 of them USSR
            (9 since 1940).

FD-2508

Card 2/2

Institution   : Laboratory of the Physiology of Circulation and Respiration (Head -
                 Prof. N. N. Gorev, Member of the Academy of Medical Sciences USSR)
                 of the Institute of Physiology imeni A. A. Bogomolets (Director -
                 Prof. A. M. Vorob'yev, Corresponding Member of the Academy of Sci-
                 ences UkSSR) of the Academy of Sciences UkSSR, Kiev.

Submitted   : March 20, 1954 by N. N. Gorev, Member of the Academy of Medical
                 Sciences USSR

GUREVICH, M. I.

      Materials on the physiological basis for treating hypertension
by prolonged sleep. Visnyk AN URSR 26 no.5:24-27 My '55.
         (Hypertension) (Sleep—Therapeutic use)   (MIRA 8:8)

GUREVICH,M.I.; KONDRATOVICH,M.A.

The Eighth All-Union Conference of Physiologists, Biochemists, and
Pharmacologists. Visnyk AN URSR 26 no.7:58-63 Jl'55. (MIRA 8:10)
   (Physiology--Congresses) (Biochemistry--Congresses) (Pharma-
                                            cology--Congresses)

GUREVICH, M I.

5019. Functional condition of the central nervous system in experimental hypertension. I. Effect of therapeutic sleep on the

chronaxie of muscle in experimental hypertension. M. I. Gurevich (?). exper. Biol. Med., 1955, 39, 29—32. Ref. Zh. Biol., 1956, Abstr. No. 50822.—In rabbits with a subcut. injection of 10 ml. of 15% urethane sleep is produced (18 hr. in 24 during the course of 10 days). In normal rabbits there is seen a distinct shortening of the chronaxie of the muscles after the third injection; in the rabbits with chronic experimental hypertension the injections lengthened the lengthening of the chronaxie during prolonged sleep. These animals is shown less marked changes when placed under light sleep of the subcortical centres and also to some diminution of the processes of inhibition in the cortex. (Russian) E. S. U?

GUREVICH, M.I.; KVITNITSKIY, M.Ye.

Electrocardiogram in healthy dogs. Fiziol.zhur. [Ukr.] 2 no.1:42-46
Ja-F '56.   (MLRA 10:1)

1. Institut fiziologii imeni O.O.Bogomol'tsya Akademii nauk URSR,
Laboratoriya fiziologii krovoobigu i dikhannya.
       (DOGS--PHYSIOLOGY)   (ELECTROCARDIOGRAPHY)

V-4

USSR/Human and Animal Physiology - Circulation.

Abs Jour   : Ref Zhur - Biol., No 4, 1958, 18185

Author   : M.I. Gurevich
Inst   : —
Title   : The Characteristics of the Cardiovascular Component of the Conditioned Feeding Response in Animals with Experimental Hypertension.

Orig Pub   : Fiziol. zh., 1956, 2, No 6, 122-128

Abstract   : In strong, even-tempered, active dogs the cardiovascular component of the conditioned-reflex response is stable and stereotyped. In weak dogs and in those in which the excitatory process predominates over the inhibitory, changes in arterial pressure and cardiac rhythm were more pronounced and unstable. Alteration and "encounter" produced transient disturbances in higher nervous activity and a short-term increase in blood pressure as well as disruption of the power relationships of the

Card 1/2

Abs Jour   : Ref Zhur - Biol., No 4, 1958, 18185

cardiovascular component. In the case of short-term and chronic forms (reflex and renal) of experimental hypertension, the cardiovascular component of the feeding reflex was strengthened, especially in the initial period of the development of hypertension. A disturbance was noted in the power relationships of the cardiovascular component and of the salivary component. A common mechanism was established for disturbances to the central nervous system associated with various forms of experimental hypertension.

Card 2/2

GUREVICH, M. I., Doc of Med Sci -- (diss) "Experimental data on the
functional status of the higher segments of the central nervous system
during hypertension." Kiev, 1957, 16 pp (Department of Biological
Sciences, Academy of Sciences UkSSR), 100 copies (KL, 35-57, 108)

USSR/Human and Animal Physiology (Normal and Pathological).   T-4
            Blood Pressure. Hypertension.

Abs Jour   : Ref Zhur - Biol., No 16, 1958, 74781

Author   : Gorev, N.N., Gurevich, M.I.
Inst   : -
Title   : On the Condition of the Higher Sections of the Central
              Nervous System During Experimental Hypertension.

Orig Pub   : V sb.: Probl. fiziol. tsentr. nervn. sistemy, M.-L.,
              AN SSSR, 1957, 200-206.

Abstract   : In dogs, reflexogenic hypertension (by means of reaction
              of the pressoreceptor apparatus of the aortic arch and of
              the carotid sinus) and renal hypertension (narrowing of
              the lumen of the renal artery) were obtained. In I the
              primary phase of hypertension, there was a weakening of
              the process of the internal inhibition, and later even of
              the process of stimulation. Study of the dynamics of un-
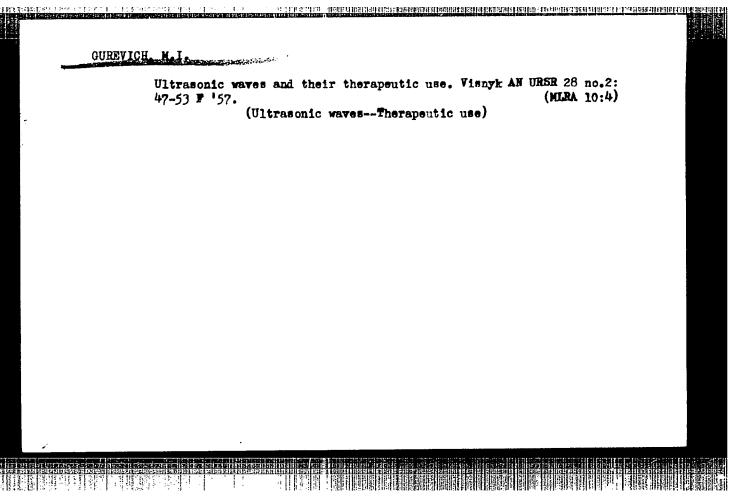   conditioned food reflexes and subordinated chronaxy found

Card 1/2

- 60 -

GUREVICH, M. I.

GUREVICH, M.I., kand.med.nauk; MAN'KOVSKIY, N.B., kand.med.nauk; PENEK, N.V.

Therapeutic use of ultrasound in treating nervous diseases. Vrach.
delo no.10:1013-1017 O '57.   (MIRA 10:12)

1. Laboratoriya krovoobrashcheniya i dykhaniy: (rukovoditel' - deyatv.
chlen AMN SSSR, prof. N.N.Gorev), otdel eksperimental'noy i kliniche-
skoy nevrologii (zav. - chlen-korr. AN USSR prof. A.F.Makarchenko)
Instituta fiziologii im. A.A.Bogomol'tsa AN USSR i klinika nervnykh
bolezney (zav. - deyatv. chlen AMN SSSR, prof. B.N.Man'kovskiy)
Kiyevskogo meditsinskogo instituta.
        (ULTRASONIC WAVES--THERAPEUTIC WAVES)
        (NERVOUS SYSTEM--DISEASES)

GUREVICH, M.I.

Ultrasonic waves and their therapeutic use. Visnyk AN URSR 28 no.2:
47-53 F '57.   (MIRA 10:4)
            (Ultrasonic waves--Therapeutic use)

GURBVICH, Moisey Isayevich [Hurevych, M.I.]; KONDRATOVICH, Marat Aviatovich
[Kondratovych, M.A.]; MAKARCHBNKO, O.F., prof., otv.red.;
NEHUSH, A.I., red.izd-va; KOLOMIYCHUK, V.O., tekhn.red.

[Medical science against religious prejudice] Medychna nauka
proty religiinykh zaboboniv. Kyiv, Vyd-vo Akad.nauk URSR, 1958.
44 p.   (MIRA 12:4)

1. Chlen-korrespondent AN USSR (for Makarchenko).
            (MEDICINE AND RELIGION)

GUREVICH, N.I., CHERKASSKIY, L.P. (Kiyev)

Effect of ultrasonic oscillations on cardiac function in frogs.
[with summary in English]. Pat.fiziol. i eksp.terap. 2 no.3
40-43 My-Je '58   (MIRA 11:7)

1. Iz laboratorii krovoobrashcheniya i dykhaniya Instituta
fiziologii AN USSR imeni A.A. Bogomol'tsa i patofizicheskoy
laboratorii Ukrainskogo nauchno-issledovatel'skogo instituta
tuberkuleza imeni F.G. Yanovskogo (rukovoditel' - deystvitel'nyy
chlen AMN SSSR prof. N.N. Gorev).
            (HEART, physiology,
                  eff. of ultrasonics in frogs (Rus))
            (ULTRASONICS, effects,
                  on heart in frogs (Rus))

GURSVICH, M.I.; KVITNITSKIY, H.Ye. [Kvitnyts'kyi, H.IB.]

Changes in the functional state of the myocardium and disorders of
coronary blood circulation in dogs with experimental hypertension.
[with summary in English]. Fiziol.zhur. [Ukr.] 4 no.1:82-89 Ja-F '58.
(MIRA 11:3)

1. Institut fiziologii im. O.O.Bogomol'tsya Akademii nauk URSR,
laboratoriya fiziologii kravoobigu i dikhannya.
(HYPERTENSION)
(BLOOD--CIRCULATION, DISORDERS, OF)

GUREVICH, M.I. [HUREVYCH, M.I.]

Use of ultrasonic vibrations in medicine and biology. Fiziol.
zhur. [Ukr.] 4 no.3:408-420 My-Je '58   (MIRA 11:7)

1. Institut fiziologii im. O.O. Bogomol'tsya AN URSR, laboratoriya
fiziologii dikhaniya i krovobigu.
           (ULTRASONIC WAVES)

DYACHENKO, S.S., BERNASOVSKAYA, Ye.P. [Bernasovs'ka, IE.P], GUREVICH, M.I.
        [Hurevych, M.I.], ANCHEVSKAYA, M.S. [Anchevs'ka, M.S.], IL'CHEVICH,N.V.,
        [Il'chevych, M.V.]

Studying the effect of ultrasonic vibrations on some microorganisms.
Report No.1: The destructive effect of ultrasound [with summary
in English]. Fiziol.zhur. Ukr. 4 no.5:612-623 S-O '58 (MIRA 11:11)

1. Institut fiziologii im. A.A. Bogomol'tsa AN USSR, laboratoriya
krovoobrashcheniya i dykhaniya i Kiyevskiy institut epidemiologii
i mikrobiologii, laboratoriya mikrobiologii.
        (ULTRASONIC WAVES--PHYSIOLOGICAL EFFECT)
        (BACTERIA)

GOREV, N.N., prof.; GUREVICH, M.I. (Kiyev)

Some problems in the pathogenesis of myocardial infarct according to
experimental data. Pat.fiziol. i eksp.terap. 3 no.6:3-13 N-D '59.

(MIRA 13:3)

1. Deystvitel 'nyy chlen AMN SSSR (for Gorev)
        (MYOCARDIAL INFRACT etiology)

BALITSKIY, K.P. [Balyts'kyi, K.P.];GUREVICH, M.I. [Hurevych, M.I.]

Antitumor vaccination. Fiziol. zhur. [Ukr.] 5 no.5:650-655 S-O '59
(MIRA 13:3)
1. Institut fiziologii in. A.A. Bogomol'tsa AN USSR, laboratoriya
kompensatornykhi zashchitnykh funktsiy i laboratoriya fiziologii
krovoobrashcheniya i dykhaniya.
(CANCER) (ULTRASONIC WAVES--THERAPEUTIC USE)

BALITSKIY, K.P. [Balyts'kyi, K.P.], kand. med. nauk; GUREVICH, M.I.,
        doktor med. nauk

        Effect of ultrasound on the development of experimental carcinoma.
        Visnyk AN URSR 30 no.8:56-59 Ag '59.   (MIRA 13:1)
                (ULTRASONIC WAVES--PHYSIOLOGICAL EFFECT)
                (CANCER)

GUREVICH, Moisey Isayevich; GOREV, N.N., otv.red.; YANKOVSKAYA, Z.B., red.izd-va; SKLYAROVA, V.Ye., tekhn.red.

[Investigation of the pathogenesis of arterial hypertension]
Issledovaniia patogeneza arterial'noi gipertonii. Kiev, Izd-vo
Akad.nauk USSR, 1960. 115 p.   (MIRA 14:2)

1. Deystvitel'nyy chlen AMN SSSR (for Gorev).
           (HYPERTENSION)

BALITSKIY, K.P.; GUREVICH, M.I. (Kiyev)

Influence of ultrasound on the biological properties of malignant
tissue. Pat. fiziol. i eksp. terap. 4 no.3:31-35 My-Je '60.
(MIRA 13:7)
1. Iz laboratorii kompensatornykh i zashchitnykh funktsiy (zav.
- akad. AN USSR P.Ye. Kavetskiy) i laboratorii krovoobrashcheniya
i dykhaniya (zav. - deystvitel'nyy chlen AMN SSSR N.N. Gorev)
Instituta fiziologii imeni A.A. Bogomol'tsa AN USSR.
(ULTRASONIC WAVES--PHYSIOLOGICAL EFFECT)   (CANCER)

KAVETSKIY, R.Ye., akademik; GUREVICH, M.I., doktor meditsinskikh nauk

Nikolai Nikolaevich Gorev; on his 60th birthday. Pat. fiziol. i
eksp. terap. 4 no.3:92-93 My-Je '60.   (MIRA 13:7)

1. Akademiya nauk USSR, (for Kavetskiy).
        (GOREV, NIKOLAI NIKOLAEVICH, 1900-)

GUREVICH, M.I. [Hurevych, M.I.]; SIROTINA, M.F. [Syrotina, M.F.]
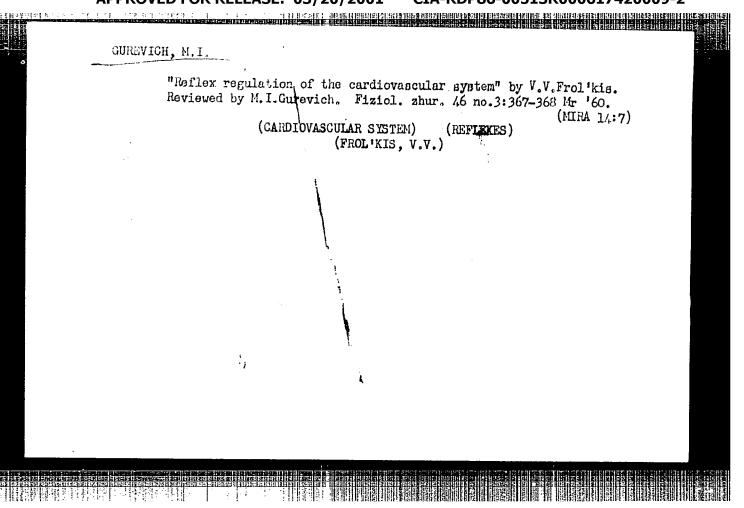
Effect of ultrasonic vibrations on the blood. Fiziol.zhur. 6
no.1:73-78 Ja-F '60.   (MIRA 13:5)

1. Institut fiziologii im. A.A. Bogomol'tsa AN USSR, labora-
toriya fiziologii krovoobrashcheniya i dykhaniya.
        (ULTRASONIC WAVES--PHYSIOLOGICAL EFFECT) (BLOOD)

KAVETSKIY, R.Ye. [Kavets'kyi, R.IE.]; GUREVICH, M.I. [Hurevych, M.I.]

Sixtieth birthday of N.N.Gorev, member of the Academy of Medical
Sciences of the U.S.S.R. Fiziol. zhur. [Ukr.] 6 no.3:418-420 My-
Je '60.   (MIRA 13:7)
        (GOREV, NIKOLAI NIKOLAEVICH,1900-)

GUREVICH, M.I.

"Reflex regulation of the cardiovascular system" by V.V.Frol'kis.
Reviewed by M.I.Gurevich. Fiziol. zhur. 46 no.3:367-368 Mr '60.
(MIRA 14:7)
(CARDIOVASCULAR SYSTEM)   (REFLEXES)
(FROL'KIS, V.V.)

GUREVICH, M.I. [Hurevych, M.I.]

Experimental investigation of the pathogenesis of arterial hyper-
tension. Fiziol. zhur. [Ukr.] 7 no.3:385-394 My-Je '61.
(MIRA 14:5)

1. Laboratoriya fiziologii krovoobrashcheniya Instituta fiziologii
im. A.A.Bogomol'tsa AN USSR, Kiyev.
(HYPERTENSION)

VAYSMAN, G.A.; GURLVICH, M.I.; SKVIRSKAYA, Ye.S.

Study on the stability of solutions of some medicinal substances under the action of ultrasonics. Apt. delo 10 no.5:11-15 S-O '61.
(MIRA 14:12)

1.Kiyevskiy institut usovershenstvovaniya vrachey i Institut fiziologii imeni A.A.Bogomol'tsa AN USSR.
            (ULTRASONIC TESTING)   (DRUGS)
                (SOLUTIONS (PHARMACY))

27.1150

39855
S/238/62/008/002/001/004
1015/1215

AUTHOR: Vyshatina, O. I., Gurevych, M. I. and Chang-Ch'i

TITLE: Changes in ECG in normal animals and in animals with experimental hypertension following the introduction of aminazine

PERIODICAL: Fiziolohichnyy zhurnal, v. 8, no. 2, 1962, 198–204

TEXT: The effect of aminazine on the cardio-vascular system has been insufficiently studied until now. ECG studies on 6 rabbits in 3 experimental series show that aminazine brought about a marked decrease in the R-wave, an increase in the T-wave, and a certain increase in the ST-interval. In cases of experimental hypertension in animals the untoward effects of aminazine could be related to myocardial hypertrophy and coronary insufficiency, whereas in normal animals aminazine affected the metabolic processes in the myocardium resulting from extracardial influences upon the heart. There are 3 figures.

ASSOCIATION: Laboratoriya fiziologii krovoobigu Institutu fiziologii im O. O. Bogomol'tsya Akademii nauk URSR, (Laboratory of Circulation Physiology, Institute of Physiology im. O. O Bogomolets, Academy of Sciences UKr SSR) Kiev

SUBMITTED: July 20, 1961

Card 1/1

GUREVICH, M.I.; KVITNITSKIY, N.Ye.; KOCHEMASOVA, N.G.; POVZHITKOV, M.M.;
        LEVCHENKO, M.N.

Experimental study of the pathogenesis of myocardial infarction.
Vrach.delo no.11:20-24 N '62.   (MIRA 16:2)

1. Laboratoriya fiziologii krovoobrashcheniya (rukovoditel' -
doktor med.nauk M.I. Gurevich)Instituta fiziologii imeni A.A.
Bogomol'tsa AN UkrSSR.
            (HEART—INFARCTION) (BLOOD—CIRCULATION, DISORDERS OF)

MAKARCHENKO, A.F., akademik, otv. red.; SIROTININ, N.N., zam. otv. red.;
KOLPAKOV, Ye.V., prof., red.; LAUER, N.V., doktor med. nauk,
red.; GUREVICH, M.I., doktor med. nauk, red.; KOLCHINSKAYA,
A.Z., kand. med. nauk, red.; YANKOVSKAYA, Z.B., red. izd-va;
BEREZOVSKAYA, D.N., tekhn. red.

"Oxygen deficiency; hypoxia and adaptation to it] Kislorod-
naia nedostatochnost'; gipoksiia i adaptatsiia k nei. Kiev,
Izd-vo AN USSR, 1963. 609 p. (MIRA 17:2)

1. Akademiya nauk URSR, Kiev. Instytut fiziologii. 2. Akademiya
nauk Ukr. SSR (for Makarchenko). 3. Deystvitel'nyy chlen AMN
SSSR (for Sirotinin).

GUREVICH, M.I.; GULYY, T.Ye., KONDRASHOVA, M.N., KUZIN, M.

Methodology of blood flow measurement in intact vessels using
thermal resistors. Fiziol. zhur. 49 no.9:1124-1128 S '63.
(MIRA 17:12)

1. From the Laboratory of Circulatory Physiology, A.A. Bogomolets
Institute of Physiology, Academy of Sciences of the Ukrainian
S.S.R., Kiyev.

GUREVICH, M.I. [Hurevych, M.I.]; KHOMUTOVSKIY, O.A. [Khomutovs'kyi, O.A.]
    OLEYNIKOVA, T.N. [Oleinykova, T.M.]; BRATUS', V.V.

State of some submicroscopic structures and ribonucleoproteins
of the heart muscle in experimental myocardial infarction.
Fiziol. zhur. [Ukr] 9 no.5:622-631 S-O'63   (MIRA 17:4)

1. Laboratoriya fiziologii krovoobrashcheniya i morfologii
nervnoy sistemy Instituta fiziologii imeni A.A. Bogomol'tsa
AN UkrSSR, Kiyev.

GUREVICH, M.I.; FOVCHETKOV, M.M.

An experimental study of some components of the pathogenesis
of myocardial infraction. Cor Vasa 6 no.4:297-307 '64.

1. Bogomolets Institute of Physiology, Academy of Science,
Kiev, U.S.S.R.

GUREVICH, M.I.; POZHITKOV, M.M.

Significance of changes in the vascular tonus in the development
of hemodynamic disorders in experimental miocardial infarct. Biul.
eksp. biol. i med. 58 no.8:22-26 Ag '64.

(MIRA 18:3)

1. Laboratoriya fiziologii krovoobrashcheniya (rukovoditel' - doktor
med. nauk M.I. Gurevich) Instituta fiziologii imeni A.A. Bogomol'tsa
(dir. - akademik AN UkrSSR A.F. Makarchenko) AN UkrSSR, Kiyev. Sub-
mitted Nov. 22, 1963.

GUREVICH, M. I.

"Impact of a Plane Plate against the Surface of the Fluid in a Half-Circular Channel," Prik. Mat. i Mekh., No.2, 1939

GUREVICH, M. I.

"Mass Adjoining a Lattice Constructed of Rectangles," Prik. Mat. i Mekh.,
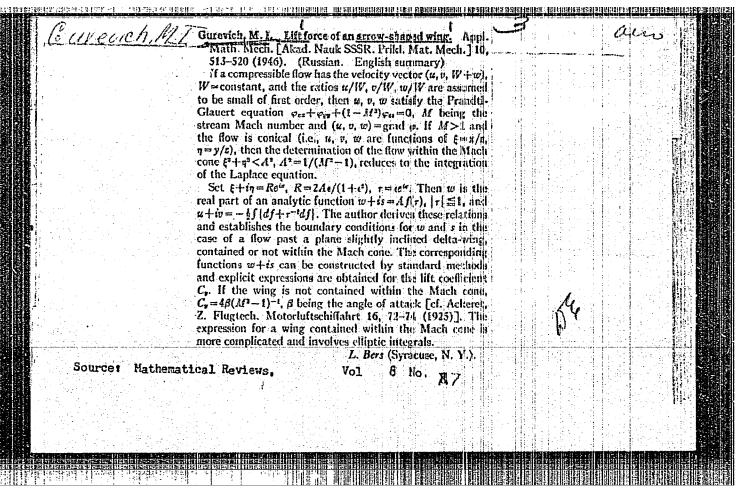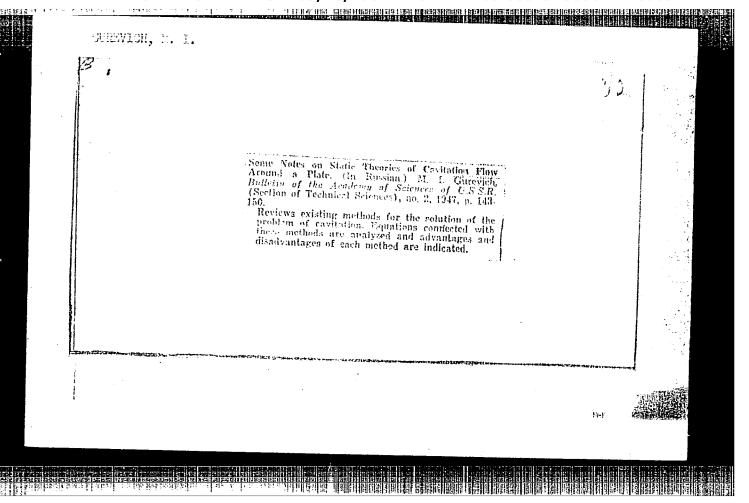No.2, 1940

GUREVICH, M. I.

USSR

N. Ye. Zhukovskiy Central Aerohydrodynamics Inst.,   (-1946-)

"symmetrical Flow with Cavitation Over a Flat Plate
Placed Between Parallell walls."

Iz. Ak. Nauk,Otdel. Tekh. Nauk,No. 4, 1946

Gurevich, M. I. Lift force of an arrow-shaped wing. Appl. Math. Mech. [Akad. Nauk SSSR. Prikl. Mat. Mech.] 10, 513–520 (1946). (Russian. English summary)

If a compressible flow has the velocity vector $(u, v, W+w)$, $W=$ constant, and the ratios u/W, v/W, w/W are assumed to be small of first order, then u, v, w satisfy the Prandtl-Glauert equation $\varphi_{xx}+\varphi_{yy}+(1-M^2)\varphi_{zz}=0$, M being the stream Mach number and $(u, v, w)=\operatorname{grad}\varphi$. If $M>1$ and the flow is conical (i.e., u, v, w are functions of $\xi=x/z$, $\eta=y/z$), then the determination of the flow within the Mach cone $\xi^2+\eta^2<A^2$, $A^2=1/(M^2-1)$, reduces to the integration of the Laplace equation.

Set $\xi+i\eta=Re^{i\omega}$, $R=2A\epsilon/(1+\epsilon^2)$, $\tau=\epsilon e^{i\omega}$. Then w is the real part of an analytic function $w+is=Af(\tau)$, $|\tau|\le 1$, and $u+iv=-\frac{1}{2}\int\{df+\tau^{-2}d\bar{f}\}$. The author derives these relations and establishes the boundary conditions for w and s in the case of a flow past a plane slightly inclined delta-wing, contained or not within the Mach cone. The corresponding functions $w+is$ can be constructed by standard methods and explicit expressions are obtained for the lift coefficient C_y. If the wing is not contained within the Mach cone, $C_y=4\beta(M^2-1)^{-1}$, β being the angle of attack [cf. Ackeret, Z. Flugtech. Motorluftschiffahrt 16, 72–74 (1925)]. The expression for a wing contained within the Mach cone is more complicated and involves elliptic integrals.

L. Bers (Syracuse, N. Y.).

GUREVICH, M. I.

Some Notes on Static Theories of Cavitation Flow Around a Plate. (In Russian.) M. I. Gurevich. Bulletin of the Academy of Sciences of U.S.S.R. (Section of Technical Sciences), no. 2, 1947, p. 143-156.

Reviews existing methods for the solution of the problem of cavitation. Equations connected with these methods are analyzed and advantages and disadvantages of each method are indicated.

GUREVICH, M. I.

Gurevich, M. I. Flow past an axi-symmetrical semi-body of finite drag. Appl. Math. Mech. [Akad. Nauk SSSR. Prikl. Mat. Mech.] 11, 97–104 (1947). (Russian. English summary)

An axially-symmetric flow is defined by the velocity potential $\varphi(r, \theta) = A(r^a P_n(\cos\theta) - 1) - Ur\cos\theta$, where r and θ are polar coordinates in a meridian plane and $-2 \leq n < 1$. The corresponding stream function is

$$\psi(r, \theta) = -A(P_n\cos\theta - P_{n-1})r^{n+1} + \tfrac{1}{2}Ur^2\sin^2\theta,$$

The streamline for $\psi(r, \theta) = 0$ is used to define an axially symmetric body for which $r = r_1$ when $\theta = 0$ and $r \to \infty$ as $\theta \to \pi$ (except when $n = 2$ which gives a sphere). The drag force on this class of bodies is then computed and the author finds that it is zero for $-2 \leq n < 0$ and infinite for $0 \leq n < 1$.

The author then attempts to find a body of finite, but positive, drag by using the velocity potential

$$\varphi(r, \theta) = \int_{-N}^{0} a(n)(r^n P_n - 1)dn - Ur\cos\theta, \qquad -2 \leq -N \leq 0,$$

where it is assumed that (1) $\int^0_{-N} a(n)dn$ converges absolutely, and (2) for some sufficiently small $\varepsilon > 0$ the function $a(n)$ does not change sign in the interval $-\varepsilon \leq n \leq 0$. An axially-symmetric body may be defined by the streamline $\psi(r, \theta) = 0$ for the stream function corresponding to $\varphi(r, \theta)$. Then, if D is the drag and x and y rectangular coordinates in a meridian plane, the author finds the asymptotic form of the body as $x \to -\infty$ to be

$$y \doteq (8D/\rho\pi)^{1/2}(|x|^{1/2})(\log|x|)^{1/2}(1 - \log\log|x|/8\log|x|).$$

The asymptotic form of $a(n)$ as $n \to 0$ is given by

$$a(n) \approx -(1/\pi)(D/-2\rho u^2)^{1}.$$

It is of interest to note that the asymptotic form of the body is identical with that obtained by N. Levinson for the asymptotic shape of an infinite cavity behind an axially symmetric body [Ann. of Math. (1) 47, 704–730 (1946); these Rev. 8 419].   J. V. Wehausen (Falls Church, Va.).

Source: Mathematical Reviews, 1948, Vol 9, No. 2

GUREVICH, M. I.

15T13

USSR/Flow, Ultrasonic
      Wing profiles

Feb 1947

"Supersonic Flow About a Triangular Wing," M. I.
Gurevich, 4 pp

"Prik Mate 1 Mekh" Vol XI, No 2 pp 247-300

A triangular wing in a nonviscous gas slightly
inclined to the plane y = 0. The supersonic
velocity W of the flow is directed along the z-axis.
Additional velocities u, v, w are insignificant com-
pared with W. The problem is reduced to the deter-
mination of function Af(t), where t is a complex
variable and v = Re /Af(t)/. Properties of conical
supersonic flow employed further in the work are

USSR/Flow, Ultrasonic (Contd)
      Wing profiles

Feb 1947

outlined in brief, and the formulae for the function
A f(t) = Af(t) given for five major cases.

FA 15T13

15T13

PA 20T4

GUREVICH, M. I.

USSR/Aeronautics   Mar 1947
     Wings - Design
     Velocity, Ultrasonic

"On the Thin Triangular Wing at Supersonic Speed,"
M. I. Gurevich, 2 pp

"Prikladnaya Matematika i Mekhanika" Vol XI, No 3
                                        pp 395-396

A solution is given for the equation of a wing taken
partially outside the machine cone. The flow inside
the machine cone is determined by the methods of
Maskind and Falkovich.

20T4

GUREVICH, N.I.

Gurevid, N. I.   Remarks on F. Vasilesco's papers contain-
ing axisymmetrical flows with free boundaries.   Doklady
Akad. Nauk SSSR (N.S.) 57, 763-764 (1947).   (Russian)
F. Vasilesco [C. R. Acad. Sci. Paris 196, 896-898, 1284-
1286 (1933)] gave without proof a method of reducing an
axisymmetric flow with free streamlines to a two-dimen-
sional flow with streamlines identical with those in a meridian
plane of the axisymmetric flow but with the free stream line

boundary condition replaced by another condition. In the
present note the author shows in two simple examples that
Vasilesco's method must be incorrect.

Source: Mathematical Reviews,   1948, Vol. 9,   No. 5

GUREVICH, M. I.

USSR

"Semibody of Finite Resistance in a Subsonic Flow.
Generalized Conical Supersonic Flows."   Thesis for
degree of Dr. Physicomathematical Sci.   Sub 26 Apr
49, Inst of Mechanics, Acad Sci USSR.

Summary 82, 18 Dec 52, Dissertations Presented For
Degrees in Science and Engineering in Moscow in 1949.
From Vechernyaya Moskva, Jan-Dec 1949.

GUREVICH, M. I.

USSR/Mathematics - Impact by a Jet   Jan/Feb 52

"Impact on a Plate During Circulatory Flow by a
Discontinuous Jet," M. I. Gurevich, Moscow

"Prik Matemat i Mekh" Vol XVI, No 1, pp 116-118

Problem was previously solved by N. Ye. Zhukovskiy
("Impact of Two Balls, One Swimming in Liquid"
1948), by M. A. Lavrent'yev and M. V. Keldysh
("Solution of Problems Concerning Impact by Water,"
Trudy TsAGI" No 152, 1935) and L. I. Sedov ("Plane
Problems of Hydrodynamics and Aerodynamics" 1950).
Gurevich solves problem in the case where a mass is
added to curvilinear plate on basis of previously
mentioned methods. Received 6 Oct 51.
                                        203T66

1542. Gurevich, M. I., and Kheskind, M. D. (Potential) flow around a slightly vibrating contour (in Russian), Prikl. Mat. Mekh. 17, 3, 593-603, Sept./Oct. 1953.

Two-dimensional (flat) potential flow of an ideal incompressible, light fluid is assumed. Mathematical form, either of potential or of conformal transformation on a half plane, for a right contour coinciding with the vibrating contour at a certain moment, is assumed known, i.e., arbitrarily given. To avoid mathematical difficulties, only first approximation in stating boundary conditions is involved. Moreover, the flow is considered symmetrical to the axis coinciding with flow direction, and the vibrations harmonical. Finally, pressure on the free boundary is assumed constant and equal to that in the stream at infinity. Computation is based on previous papers by Gurevich, Sedov (in Russian), and Kreutzky [Proc. roy. Soc., 1923]. Solution involves functions related to error integral (in particular case of vibration of a flat strip it is shown to be easily integrable). It is in a form of two terms: the first depends on the contour shape and causes no waves in the flow; the other causes waves, these being independent of contour shape. The latter influences only amplitude and phase of waves.   B. Szczeniowski, Canada

P.2
56-55

GUREVICH, M.I

GUREVICH, M, I,

USSR

Gurevič, M. I. On some solutions of the wave equation.
Dokl. Akad. Nauk SSSR (N.S.) 97, 385–388 (1954).
(Russian)

If the wave equation

(1) $$\phi_{xx} + \phi_{yy} - \phi_{zz} = 0$$

is transformed through the substitution

$$x = -r\frac{\cos\sigma}{\sinh\delta}, \quad y = -r\frac{\sin\sigma}{\sinh\delta}, \quad z = -r\coth\delta,$$

it becomes

(2) $$\phi_{\sigma\sigma} + \phi_{\delta\delta} = \frac{1}{\sinh^2\delta}\frac{\partial}{\partial r}\left(r^2\frac{\partial\phi}{\partial r}\right).$$

The author finds solutions of equation (1) inside the cone
$z^2 - x^2 - y^2 = 0$ $(z > 0)$, where $r = (z^2 - x^2 - y^2)^{1/2}$ is real. Solu-
tions of (1) are written in the form $\phi = \sum_{n=1}^{\infty} r^n\phi_n$, where
ϕ_n must satisfy the equation

$$\frac{d^2\phi_n}{d\sigma^2} + \frac{d^2\phi_n}{d\delta^2} - \frac{n(n+1)}{\sinh^2\delta}\phi_n = 0.$$

An iterative procedure is given for the determination of ϕ_n
in terms of arbitrary harmonic functions. In any given
physical problem, these harmonic functions are determined
from the boundary conditions.
                                                C. G. Maple.

SOV/124-58-11 12550

Translation from: Referativnyy zhurnal, Mekhanika 1958, Nr 11, p 86 (USSR)

AUTHORS: Gurevich, M. I.—Pykhtyev, G. N.

TITLE: On Some Methods of the Solution of Theoretical Problems Concerning a Heavy Liquid Jet (O nekotorykh metodakh resheniya zadach teorii struy tyazheloy zhidkost:)

PERIODICAL: Tr. Mosk. tekhn. in-ta rybn. prom-sti i kh-va, 1957, Nr 8, pp 48-65

ABSTRACT: Presentation of a paper by Marchi (Marchi, Enrico, Ann. mat. pura ed appl., 1953, Vol 35, pp 327-341; RZhMekh, 1955, Nr 1 abstract 154), together with a description of the Woronetz method (Woronetz Constantin, C. r. Acad. Sci., 1953, Vol 236, Nr 3, pp 271-273; RZh Mekh, 1953, Nr 1, abstract 144). The authors adduce a solution of the Marchi problem by means of the Woronetz method. A detailed computation is given for a single case, which shows an almost identical coincidence of the numerical results obtained by the Marchi method and the Woronetz method. This is followed by a brief explanation of the well-known solution by N. Ye. Kochin relative to the flow of a heavy liquid through a spillway outlet. Thereupon the same problem

Card 1/2

SOV/124-58-11-12550

On Some Method of the Solution of Theoretical Problems Concerning a Heavy Liquid

is solved by the Marchi and Woronetz methods. It is shown that these approximate methods for the solution of the exact problem yield a rougher approximation than the exact solution of the linearized problem set forth by N. Ye. Kochin. The mean depth at infinity obtained by the Marchi method coincides with N. Ye. Kochin's result. The Woronetz method yields a less accurate result.

N. N. Moiseyev

Card 2/2

Gurevich, M.I.

Distr: 4E4f/4Fl
3/14/2   533.6.011.3
Concerning the Linearisation of the   Prikl. Mat. Mekh.
Gas Dynamics Equations   21(3).437-438
                                              1957
                                              U.S.S.R.
   M.I. Gurevich, M.D. Khaskind
The objective of this is to show considerable sensitivity
of the solution of the gas dynamics equations to the
linearisation of boundary conditions.   The plane
subsonic flow of a non-viscous gas past an infinite plate
is considered.   The equation of continuity is applied in
a linearised form in accordance with Prandtl-Glauert.
In laying down precise boundary conditions, an area of
the flow near the leading edge is disregarded.   The lift-
Mach number relationship differs from that in the Prandtl-
Glauert theory.   The formulae is not applicable for
large Mach numbers.   Bibl. 2.

10(2)
AUTHOR: Gurevich, M. I.   SOV/20-124-5-10/62

TITLE: Unsteadiness of Some Jet-like Flows With Free Surfaces
               (Ob neustoychivosti nekotorykh struynykh techeniy so svobodnymi
               poverkhnostyami)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 5, pp 998 - 1000
               (USSR)

ABSTRACT: By a simple example the author demonstrates that the neutral
               stability of the potential of velocity not necessarily entails
               the neutral stability of the free surface. The problem in what
               measure the neutral disturbances may be considered stable in
               the usual sense, is set aside. The present paper is concerned
               with the problem of an even current with the finite depth h
               of an ideal incompressible fluid with no gravity of the
               density ρ. The velocity of the undisturbed current is assumed
               to be parallel to the ground, the pressure p_0 above the free
               surface to be constant and the density of the medium above the
               free surface to be equal to zero. The velocity potential φ of
               the unsteady current is represented by the form

Card 1/3

Unsteadiness of Some Jet-like Flows With Free Surfaces   SOV/20-124-5-10/62

$\varphi = vx - v \, Re \left[C \; ch \; k(y + h)e^{ikx} \right]$. Here C is assumed to be a function of the time t. The potential φ conforms to the equation of Laplace and on the ground $(\partial \varphi / \partial y)_{y=-h} = 0$ holds. The Lagrange integral for the free surface is then written down. The condition $vC \; ch \; k(y + h)e^{ikx} + Cikv^2 \; ch \; k(y + h)e^{ikx} = 0$; $\dot{C} = \frac{\partial C}{\partial t}$ holds for on the free surface. $C = C_0 e^{-ikvt}$ results after some calculations. The velocity potential φ is neutrally stable, in the sense of Fox and Morgan. The condition that the fluid parts do not leave the free surface $y = \eta(t,x)$ is then written down. The function $\eta(t,x)$ contains secular structures and the free surface is unstable. Examples may be mentioned to show that the velocity potential and the elevations of the free surface are simultaneously neutrally stable. To facilitate matters the author examines a current of infinite depths with a horizontal free surface and he also considers the capillary forces. A vacuum is assumed underneath the current. This problem is an exception to the wellknown problem of stability of the dividing line of two mediums with different densities. The capillary forces probably repress

Card 2/3

Unsteadiness of Some Jet-like Flows With Free Surfaces SOV/20-124-5-10/62

the secular structures of η not only in the examined example
but also in more general cases. There are 1 figure and
2 references, 1 of which is Soviet.

ASSOCIATION: Moskovskiy tekhnicheskiy institut rybnoy promyshlennosti i
khozyaystva im. A. I. Mikoyana (Moscow Technical Institute
for the Fisheries Industry and -Economy imeni A. I. Mikoyan)

PRESENTED: November 10, 1958, by L. I. Sedov, Academician

SUBMITTED: November 5, 1958

Card 3/3

GUREVICH, M. I.   (Moscow)

   "The Theory of Liquid Streams (Jets) of Perfect Fluids."

report presented at the First All-Union Congress on Theoretical and Applied
Mechanics, Moscow, 27 Jan - 3 Feb 1960.

S/040/61/025/006/009/021.
D299/D304

AUTHOR: Gurevich, M.I. (Moscow)

TITLE: Influence of capillary forces on the compression
             coefficient of jets

PERIODICAL: Prikladnaya matematika i mekhanika, v. 25, no. 6,
             1961, 1060 - 1067

TEXT: The small-parameter method is used to solve jet-flow prob-
lems, capillary forces being taken into account. The superposition
of linearized capillary waves on jet flows is considered. As the
article is of an exploratory character, only a very simple prob-
lem of jet-flow theory is considered, namely plane, symmetric jet
flow of an ideal, weightless, incompressible fluid (see Fig. 1);
surface tension is taken into account. The width of the orifice is
$2l$, of the jet - 2δ, the compression coefficient is $k = \delta/l$. Boun-
dary conditions on free surface: The atmospheric- and fluid pressu-
re are denoted by p_1 and p respectively, the coefficient of surface
tension - by α, the discharge by $q = v_0\delta$, the angle between the ve-
Card 1/7

locity v and the x-axis - by θ; the dimensionless quantities V and
a are introduced:

$$V = \frac{v}{v_0}, \qquad a = \frac{\alpha}{\rho v_0 q} = \frac{\alpha}{\rho v_0^2 \delta} ; \qquad (2.5)$$

thereupon

$$V = aq \frac{d\Theta}{d\varphi} + \sqrt{1 + a^2 (q \frac{d\Theta}{d\varphi})^2}, \qquad (2.6)$$

where φ is the real part of the complex flow-potential. The problem
can be tentatively solved by the method of successive approxima-
tions, taking a as a small parameter; below, only the first two
approximations are considered. Solution of problem in the second
approximation. The auxiliary function

$$\Omega = \omega - \omega_1 = \ln \frac{dw}{v_0 dz} - \ln \frac{\sqrt{1-t} + i\sqrt{1+t}}{\sqrt{2}} \qquad (4.1)$$

is introduced, assuming V(t) as known on the interval $-1 < t < 1$
of the real axis; ω is Zhukovskiy's function. In the second appro-
ximation, one obtains:

Card 2/7

Influence of capillary forces on ...

S/040/61/025/006/009/021
D299/D304

$$\Omega = \ln\left(1 + a_1 \frac{\sqrt{1+t}}{\sqrt{1-t}}\right) + \frac{2i}{\pi}\sqrt{1-t^2}\,\vartheta\,(a_1,\,t)$$

(5.2)

$$\vartheta\,(a_1,\,t) = \int_0^{a_1} \frac{\ln\,[a_1\sqrt{1+t}\,/\sqrt{1-t}]}{1-t-a_1^2\,(1+t)}\,da_1$$

where $a_1 = \pi a/2$. Using formula (5.2) and formula

$$dy = \frac{\delta}{\pi\sqrt{2}}\left[\frac{1}{\sqrt{1+t}\,(1+a_1\sqrt{1+t}\,/\sqrt{1-t})} + \right.$$
$$\left. + \frac{\sqrt{1-t}}{(1+t)\,(1+a_1\sqrt{1+t}\,/\sqrt{1-t})}\,\frac{2}{\pi}\sqrt{1-t^2}\,\vartheta\,(a_1,\,t)\right]dt$$

(6.4)

one obtains for the coefficient of compression k

$$k\,(a) = k\,(0)\left\{1 + \frac{\alpha}{\pi\rho l v_0^2}\left[2\ln\frac{2\rho l v_0^2}{\alpha\,(2+\pi)} + \pi + 2 + 2\ln 2\right]\right\}$$ (where $k(0) = \pi/(\pi + 2))$),

(6.9)

or $k\,(a) \approx 0.611\left\{1 + \frac{0.318\pi}{\rho l v_0^2}\left[2\ln\frac{0.39\rho l v_0^2}{\alpha} + 6.52\right]\right\}$

(6.10)

Capillary waves on surface of flow of finite depth: The above solu-
Card 3/7

Influence of capillary forces on ...

tion is not unique, as capillary waves may exist on the free surface. It is shown how capillary waves of small amplitude are superposed on the flow under consideration. Let δ denote the mean depth of the flow and v_0 the velocity at some point D (see Fig. 3). The solution is sought in the form

$$\frac{dw}{dZ} = v_0[1 - \varkappa A \sin \frac{\varkappa(w + \varphi_0)}{v_0}], \qquad (7.1)$$

where w is the complex potential, A, $\varkappa$, φ_0 are real constants, and Z = X + iY. Neglecting quantities which are of higher order, one obtains

$$v^\circ = v_0 \left[1 - \varkappa A \sin \frac{\varkappa}{v_0} (\varphi + \varphi_0) \operatorname{ch} \varkappa\delta \right], \quad 0^\circ = \varkappa A \cos \frac{\varkappa}{v_0} (\varphi + \varphi_0) \operatorname{sh} \varkappa\delta$$

hence

$$\varkappa \operatorname{th} \varkappa\delta = \frac{\rho v_0^2}{\alpha} \qquad (7.3)$$

Card 4/7

Influence of capillary forces on ...

S/040/61/025/006/009/021
D299/D304

Equation (7.3) determines the frequency $\varkappa$, at which small sinusoidal capillary waves are possible. For comparatively small α and sufficient depth, th $\varkappa\delta \approx 1$ and $\varkappa \approx \rho v_0^2/\alpha \gg 1$. The function

$$\omega^0 = \ln \frac{dw}{v_0 dZ} = \ln V^0 - i\theta^0 \qquad (7.5)$$

is introduced, to which the term ω_+ is added which corrects the boundary conditions; thus the following Zhukovskiy function is considered

$$\omega = \omega_1 + \Omega + \omega^0 + \omega_+ = \ln V - i\theta. \qquad (7.6)$$

Determination of auxiliary function $\omega_+ = V_+ - i\theta_+$. This reduces to well-known problem of finding a function of a complex variable which is holomorphic in the upper half-plane, under the condition that on part of the boundary Im ω_+ is given:

$$\theta_+ = 0 \text{ for } t < -1 \qquad (8.1)$$

Card 5/7

Influence of capillary forces on ...   S/040/61/025/006/009/021
D299/D304

$$- \text{Im } \omega_+ = \theta_+ = - \varkappa A \cos\left[- \frac{\varkappa \delta}{\pi} \ln(1 + t) + \frac{\varkappa \varphi_0}{v_0}\right] \text{sh } \varkappa \delta \quad \text{for } t > 1, \quad (8.2)$$

and on another part of the boundary, Re ω_+:

$$\ln V_+ = 0 \quad \text{for } -1 < t < 1. \qquad (8.6)$$

By means of Schwartz's formula one obtains

$$\frac{\omega_+}{\sqrt{t^2 - 1}} = \text{sh } \varkappa \delta \frac{\varkappa A}{\pi} \int_1^\infty \frac{\cos\left[(-\varkappa \delta / \pi) \ln (1 + \xi) + \varkappa \varphi_0 / v_0\right] d\xi}{\sqrt{\xi^2 - 1}\,(\xi - t)} \qquad (8.7)$$

There are 3 figures and 6 references: 4 Soviet-bloc and 2 non-Soviet-bloc (including 1 translation). The reference to the English-language publication reads as follows: E.B. McLeod, The explicit solution of a free boundary problem involving surface tension. Journal of Rational Mechanics and Analysis, 1955, v. 4, no. 4.

SUBMITTED: August 23, 1961

Card 6/7

GUREVICH, M.I. (Moskva)

Vortex near a free surface. Prikl. mat. i mekh. 27 no.5:899-902
S-O '63.   (MIRA 16:10)

GUREVICH, M.I., dokter fiziko-matematicheskikh nauk, prof.

Generalized supersonic conical flows. Trudy MIIT no.164:150-164
'63.
(MIRA 18:3)

GUREVICH, M.I. [Hurevych, M.I.]

Experimental myocardial infarct. Fiziol. zhur. [Ukr.] 9 no.2:
158-171 Mr-Ap '63.   (MIRA 18:3)

1. laboratoriya fiziologii krovoobrashcheniya Instituta fiziologii
im. Bogomol'tsa AN UkrSSR, Kiyev.

L 44342-65   EWT(1)/EWP(m)/EWA(d)/FCS(k)/EWA(l)   Pd-1
ACCESSION NR: AP5010634   UR/0040/65/029/002/0355/0355

AUTHOR: Gurevich, M. I. (Moscow)

TITLE: Effect of aperture on resistance of a jet flowed about by an isolated stream

SOURCE: Prikladnaya matematika i mekhanika, v. 29, no. 2, 1965, 355-356

TOPIC TAGS: jet stream, jet nozzle

ABSTRACT: The author claims that it is generally thought that if, on the surface of
a body about which flows a continuous stream, an aperture is made, then the coeffi-
cient of resistance of the body is decreased. Using computations done by others, he
concludes that when a wedge is put by the aperture opposing the incidental flow the
aperture increases the coefficient of resistance, though in the opposite case it
decreases it. Orig. art. has: 5 figures and 1 formula.

ASSOCIATION: none

SUBMITTED: 14Oct64   ENCL: 00   SUB CODE: ME, AS

NO REF SOV: 002   OTHER: 002

Card 1/1

GUREVICH, M.I.

Unsteadiness of certain flows with free surfaces. Dokl. AN
SSSR 124 no.5:998-1000 F '59.   (MIRA 12:3)

1.Moskovskiy tekhnicheskiy institut rybnoy promyshlennosti i
khozyaystva imeni A.I. Mikoyana. Predstavleno akademikom L.I.
Sedovym.
                    (Fluid dynamics)

SHIROKOV, Sergey Ivanovich, inzh. [deceased]; Prinimali uchastiye:
ZAYETS, V.N., dotsent; GUREVICH, M.I., dotsent. STADNIKOV, G.D.,
inzh., retsenzent; SHUL'MAN, L.G., inzh., retsenzent; DUGINA,
N.A., tekhn.red.

[Production of boilers] Kotel'noe proizvodstvo. Izd.3. Moskva,
Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 280 p.
(MIRA 14:3)

(Boilers)

GUREVICH, M.I.; PYKHTEYEV, G.N.

Approximate solution to the problem of the flow of a heavy ideal
incompressible liquid emerging from under a shield. PMTF no.2:
3-14 Jl-Ag 60.   (MIRA 14:6)
                        (Hydrodynamics)

BR

PHASE I BOOK EXPLOITATION   SOV/5980

Gurevich, Maksim Isidorovich

Teoriya struy ideal'noy zhidkosti (Streamline Theory of the Ideal
    Fluid) Moscow, Fizmatgiz, 1961. 496 p. 6500 copies printed.

Ed.: S.N. Shustov; Tech. Ed.: S.N. Akhlamov.

PURPOSE: This book is intended for readers familiar with hydrody-
    namics.

COVERAGE: The author has attempted 1) to systematize the modern
    theory of streamlines and in so doing fill a gap in Soviet
    literature, and 2) to present a clear view of the theory in
    order to contribute to deeper studies of the theory. The
    classical problems in the theory are discussed in relative de-
    tail, and solutions of simpler problems, especially those with
    available numerical results, are given. The last part of the
    book, including material on the existence and uniqueness of
    solutions, as well as on supersonic streamline flows, has been

Card 1/7

Streamline Theory of the (Cont.)   SOV/5980

written as a survey. The author thanks Leonid Ivanovich
Sedov, G.A. Dombrovskiy, Ya.I. Sekerzh-Zen'kovich, S.V. Fal'-
kovich, L.A. Epshteyn, and N.A. Slezkin. There are 260 refer-
ences: 115 Soviet (7 translations), 75 English, 30 German,
28 French, 10 Italian, 1 Polish, and 1 Rumanian.

TABLE OF CONTENTS:

Card 2/7

Streamline Theory of the (Cont.)   SOV/5980

Card 3/7

Streamline Theory of the (Cont.)   SOV/5980

Card 4/7

Streamline Theory of the (Cont.)   SOV/5980

Card 5/7

Streamline Theory of the (Cont.)   SOV/5980

Card 6/7

Streamline Theory of the (Cont.)   SOV/5980

AVAILABLE: Library of Congress

SUBJECT: Physics

Card 7/7   AD/wrc/bc
                                                  7-18-62

GUREVICH, M.I., dotsent, kand.tekhn.nauk

Heat transfer in the gasification heat exchange of an oxygen system
with a liquid pump. Trudy Ural. politekh. inst. no.108:89-96 '61.
(MIRA 16:9)

BASKAKOV, A.P.; GUREVICH, M.I.; RESHETIN, N.I.; RYSAKOV, N.F.;
        SHALAYEV, N.B.; GIRSHFEL'D, V.Ya., red.; FRIDKIN, L.M.,
        tekhn. red.

[General heat engineering] Obshchaia teplotekhnika. [By]
A.P.Baskakov i dr. Moskva, Gosenergoizdat, 1963. 391 p.
                                        (MIRA 16:6)
                (Heat engineering)

Gukelich, M.J.

PHASE I BOOK EXPLOITATION   SOV/6201

Vsesoyuznyy s"yezd po teoreticheskoy i prikladnoy mekhanike. 1st, Moscow, 1960.

Trudy Vsesoyuznogo s"yezda po teoreticheskoy i prikladnoy mekhanike,
27 yanvarya -- 3 fevralya 1960 g. Obzornyye doklady (Transactions of the
All-Union Congress on Theoretical and Applied Mechanics, 27 January to
3 February 1960. Summary Reports). Moscow, Izd-vo AN SSSR, 1962.
467 p. 3000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Natsional'nyy komitet SSSR po
teoreticheskoy i prikladnoy mekhanike.

Editorial Board: L. I. Sedov, Chairman; V. V. Sokolovskiy, Deputy Chairman;
G. S. Shapiro, Scientific Secretary; G. Yu. Dzhanelidze, S. V. Kalinin,
L. G. Loytsyanskiy, A. I. Lur'ye, G. K. Mikhaylov, G. I. Petrov, and
V. V. Rumyantsev; Resp. Ed.: L. I. Sedov; Ed. of Publishing House:
- A. G. Chakhirev; Tech. Ed.: R. A. Zamarayeva.

Card 1/ 6

Transactions of the All-Union Congress (Cont.)   SOV/6201

(25)

PURPOSE: This book is intended for scientific and engineering personnel who
   are interested in recent work in theoretical and applied mechanics.

COVERAGE: The articles included in these transactions are arranged by
   general subject matter under the following heads: general and applied me-
   chanics (5 papers), fluid mechanics (10 papers), and the mechanics of rigid
   bodies (8 papers). Besides the organizational personnel of the congress,
   no personalities are mentioned. Six of the papers in the present colleotion
   have no references; the remaining 17 contain approximately 1400 references
   in Russian, Ukrainian, English, German, Czechoslovak, Rumanian, French,
   Italian, and Dutch.

TABLE OF CONTENTS:

SECTION I. GENERAL AND APPLIED MECHANICS

Card 2/6

GUREVICH, M.I., inzh.

     Manufacture of large articles at brick plants. Stroi. mat. 10
     no.11:14 N '64.   (MIRA 18:1)

GUREVICH, M.I. (Moskva)

Sound conductivity of a fine-mesh lattice. Prikl. mat. i mekh.
28 no.5:956-958 S-O '64.

(MIRA 17:11)

VAYSMAN, G.A.; GUREVICH, M.I.; SKVIRSKAYA, Ye.S.

Use of ultrasonics for the preparation of infusions and extracts from alkaloid-containing plant stock. Apt. delo 11 no.6:17-21 N-D'62   (MIRA 17:7)

1. Kiyevskiy institut usovershenstvovaniya vrachey.

VAYSMAN, G.A. [Vaisman, H.A.]; GUREVICH, M.I.; SKVIRSKAYA, Ye.S.
[Skvyrs'ka, IE.S.]; GORODINSKAYA, V.Ya. [Horodyns'ka , V.IA.]

Using ultrasonic waves in the preparation on infusions
from alkaloid-and glucoside-bearing plants. Farmatsev.
zhur. 18 no.4:61-65 '63.   (MIRA 17:7)

1. Kafedra tekhnologii lekarstv i galenovykh preparatov
Kiyevskogo instituta usovershenstvovaniya vrachey i
Laboratoriya krovoobrashcheniya i dykhaniya Instituta
fiziologii im. Bogomol'tsa AN UkrSSR.

POLYAK, M.A.; BIBIKOVA, A.F.; GUREVICH, M.I.

Studying the possibility of accelerating the vulcanization of automobile inner tubes. Kauch.i rez. 16 no.5:30-32 My '57.
(MIRA 10:7)

1. Yaroslavskiy shinnyy zavod.
(Vulcanization)   (Tires, Rubber)

ACCESSION NR: AP4015976

S/0040/63/027/005/0899/0902

AUTHOR: Gurevich, M. I. (Moscow)

TITLE: Vortex near a free surface

SOURCE: Prikl. matem. i mekhan., v. 27, no. 5, 1963, 899-902

TOPIC TAGS: vortex, free surface, underwater wing, ideal incompressible weight-less fluid, conformal mapping, parametric variable, logarithmic singularity

ABSTRACT: In the basic studies on theory of underwater wings it is assumed that the free surface differs very little from the horizontal level of unperturbed fluid. This approach prevents application of the theory to the case of small submersions of a wing. Therefore it is valuable to study the properties of the case of small submersions with the help of a precise solution of the problem, even if the problem is simplified. In particular the author solves the plane problem of flow around a vortex by an ideal, incompressible, weightless fluid with a free surface. The flow is bounded from below by a hard horizontal wall. Problems closest to the one treated here have been solved by N. Simmons and A. A.

Card 1/2

ACCESSION NR: AP4015976

Nikol'skiy.   Orig. art. has: 5 figures and 12 formulas.

ASSOCIATION: none

SUBMITTED: 27May63   DATE ACQ: 21Nov63   ENCL: 00

SUB CODE: AI   NO REF SOV: 004   OTHER: 002

Card 2/2

ACC NR: AT6036545

SOURCE CODE: UR/0000/66/000/000/0141/0142

AUTHOR: Gurevich, M. I.; Bershteyn, S. A.

ORG: none

TITLE: The role of changes in tissue partial oxygen pressure in the regulation of local blood circulation during acute hypoxia [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24 to 27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966. Problemy kosmicheskoy meditsiny. 141-142

TOPIC TAGS: hypoxia, circulatory system, oxygen consumption, blood pressure

ABSTRACT: A study was made of the character and direction of local vascular reactions as mechanisms of circulatory regulation during hypoxia. Acute hypoxia was induced in chloralose-nembutal anesthetized cats by making them breathe oxygen-poor gas mixtures. Changes in pO_2 and tissue blood flow were determined in upper hind leg muscles, abdominal epidermis, and the parietal region of the cerebral cortex. Blood pressure was measured on the femoral artery. Tissue pO_2 was measured by the polarographic method. Tissue blood flow was recorded thermoelectrically. A special device was used for synchronous recording of the dynamics of changes in tissue blood flow, tissue pO_2, and systemic arterial pressure.

Card 1/2

ACC NR: AT6036545

It was found that during acute hypoxia, tissue oxygen supply is not uni-
form. The cerebral cortex receives the best oxygen supply at the expense
of skeletal muscle, skin, and some other organs, as a result of a redistri-
bution of blood accomplished by a complex of changes in peripheral vascular
tonus.

Changes in local vascular resistance and adequate systemic arterial
pressure provide a blood flow pattern satisfying tissue oxygen requirements.

The mechanisms of local vascular tonus regulation in hypoxia are not
yet understood and require further study. [W.A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 2/2